



Duplicate and Salami Publications in Science

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Talk “Roadmap”

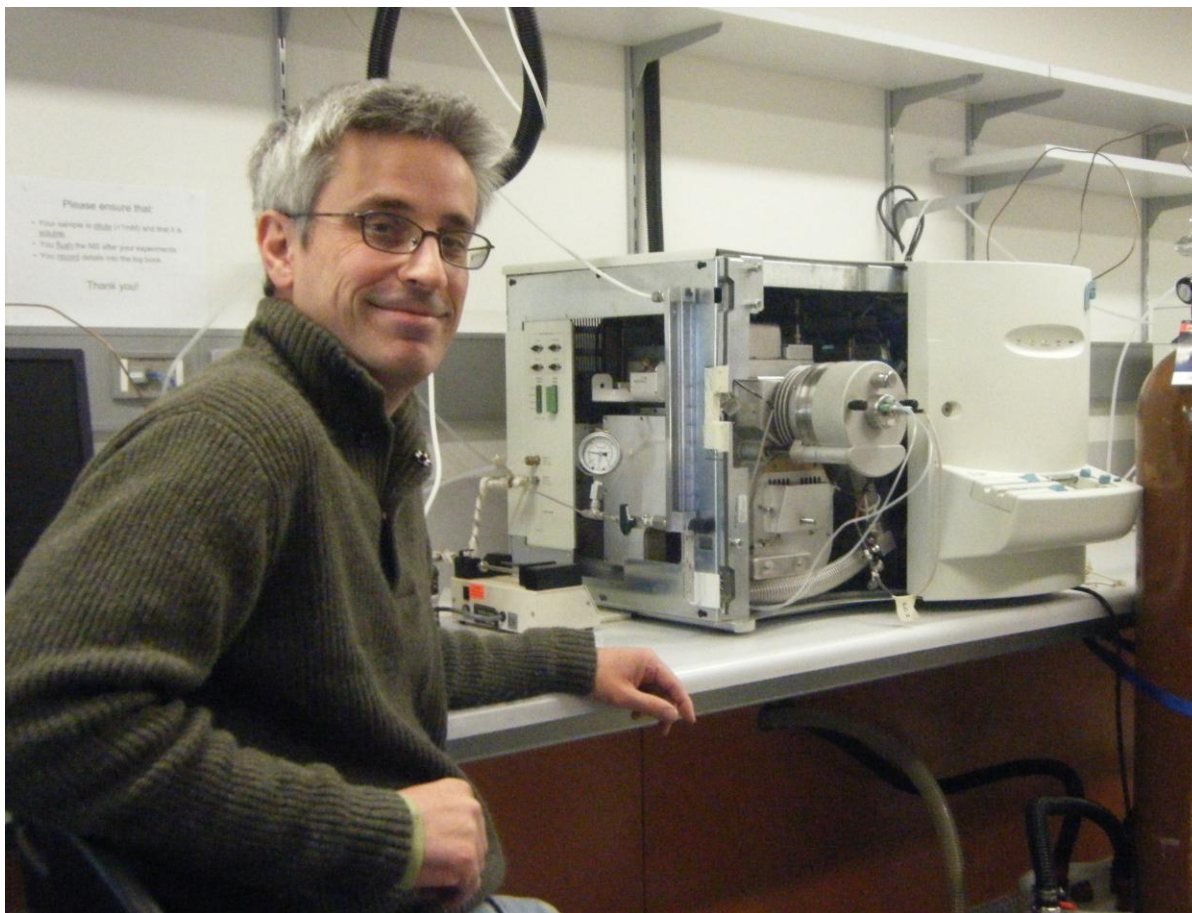
- **How did I get interested in this issue?**
- **Definitions.**
- **Duplicate Publications in Medicine.**
- **How bad is the problem in Science?**
- **Mass Spectrometry highlights the Challenges of Detecting Duplicate Publications.**
- **The 2009 Literature as a case study.**
- **What can we do to minimize Duplicate Publication?**

Talk “Roadmap”

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My background

- I am a chemist who uses mass spectrometry to study fundamental and applied problems



The fact that each unique compound gives a unique “fingerprint” has made MS a widely used tool!



“Okay—who put my lunch through the mass spectrometer..?”

Mass Spectrometry has made a major impact in a wide range of science and technology:

- **PHYSICS (isotopes)**
- **CHEMISTRY (molecular formulas and structure)**
- **BIOLOGY/MEDICINE (structure and function)**

How Important is Mass Spectrometry?

mass spectrometry has evolved from an art practiced by a few to *a widely used analytical science that produces a billion individual mass spectra daily*

K. L. Busch, *Spectroscopy*, 2000, 15, 30

The Journal of the American Society for Mass Spectrometry (JASMS)

- Society journal for the American Society for Mass Spectrometry (ASMS), formed in 1969 to promote and disseminate knowledge of mass spectrometry and allied topics.
- Members come from academic, industrial and governmental laboratories with interests in chemistry, geology, forensics, biological sciences and physics.

JASMS

- ASMS sponsors the [Annual Conference on Mass Spectrometry and Allied Topics](#) that is attended by more than 6,500 scientists.
- Nearly 3,000 papers are presented as posters and talks.
- Society has over 7,500 members who all receive a hardcopy of the Journal!

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- **2010 Impact Factor: 3.830**

JASMS

- Editors are academics
- 1 editor in chief
- 6 Associate editors
- 24 Editorial Board Members
- I joined as associate editor in late 2009
- **Reflection After 100 Articles**
Handled: 2 articles were rejected
based on self plagiarism

Paper 1 (2010-4735) “Overt”

- **Reviewer 3 Comments to Author:**

2. Could the authors explain why the first half paragraph of the 'Sample Preparation' section is nearly exactly the same word by word as their previous publications (reference 3, 6, and 7)? Is this because the sample was obtained from the same patients from previous study? If so, the authors should indicate this in the 'sample preparation' section.

5. Can the authors explain why Figures 6(a) and 6(b) are exactly the same figures as their previous publication (Figures 2(a) and 2(b) of reference number 2)?

Paper 1 (2010-4735) “Overt”

- **Reviewer 3 Comments to Editor:**

The second problem is that as this work is a continuation of a major work from the group there are a number of overlaps in the manuscript with their previous work. For example, a part of the sample preparation section is a direct copy of their previous manuscript (major point #2) and Figures 6(a) and 6(b) are exactly the same figures as Figures 2(a) and 2(b) of reference 2 (XXX et al, Experimental Neurology (201X), XXX, XXX) (major point #5).

Paper 2 (2011-4785) “Concealed”

- **Reviewer 2 Comments to Author:**

Of great concern to me was that numerous instances of very similar, and in some cases identical, sections of text appeared in the introductory sections of an article published by the same authors that recently appeared on-line in *Anal. Chim. Acta.* (2011 In Press), that reported the use of the same reagents under similar reaction conditions for the derivatization and quantitative analysis of alcohols such as cholesterol.

Furthermore, the rationale, reagents, experimental approach, results (with the exception of its application to alpha-, beta-unsaturated ketones), and conclusions described in this manuscript are all very similar to those appearing in the *Anal. Chim. Acta.* article.

Paper 2 (2011-4785) “Concealed”

- **Reviewer 2 Comments to Editor:**

Due to the significance of the plagiarism and lack of novelty issues outlined above in my comments to the authors, I recommend that the manuscript be rejected and not considered further for publication. **Any future submissions by these authors should be very carefully vetted by the journal to ensure that 'double-dipping' (i.e., publishing essentially the same work in two different places at the same time) is avoided.....**

Our JASMS guidelines

Instructions for Authors

MANUSCRIPT SUBMISSION

Manuscript Submission

Submission of a manuscript implies: that the work described has not been published before; that it is not under consideration for publication anywhere else; that its publication has been approved by all co-authors, if any, as well as by the responsible authorities – tacitly or explicitly – at the institute where the work has been carried out. The publisher will not be held legally responsible should there be any claims for compensation.

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ACS has an Journals' Ethical Guidelines

<http://pubs.acs.org/page/policy/ethics/index.html>

has a section B on the expectations of authors.

Here are some relevant excerpts:

6. Fragmentation of research reports should be avoided. A scientist who has done extensive work on a system or group of related systems should organize publication so that each report gives a well-rounded account of a particular aspect of the general study. Fragmentation consumes journal space excessively and unduly complicates literature searches. The convenience of readers is served if reports on related studies are published in the same journal, or in a small number of journals.
7. In submitting a manuscript for publication, an author should inform the editor of related manuscripts that the author has under editorial consideration or in press. Copies of those manuscripts should be supplied to the editor, and the relationships of such manuscripts to the one submitted should be indicated.
8. It is improper for an author to submit manuscripts describing essentially the same research to more than one journal of primary publication, unless it is a resubmission of a manuscript rejected for or withdrawn from publication. It is generally permissible to submit a manuscript for a full paper expanding on a previously published brief preliminary account (a “communication” or “letter”) of the same work. However, at the time of submission, the editor should be made aware of the earlier communication, and the preliminary communication should be cited in the manuscript.

ACS has an Journals' Ethical Guidelines

<http://pubs.acs.org/page/policy/ethics/index.html>

has a section B on the expectations of authors.

Here are some relevant excerpts:

13. Plagiarism is not acceptable in ACS journals. ACS journals adhere to the U.S. National Science Foundation definition of plagiarism as “the appropriation of another person’s ideas, processes, results, or words without giving appropriate credit” (45 Code of Federal Regulations, Section 689.1). Authors should not engage in plagiarism - verbatim or near-verbatim copying, or very close paraphrasing, of text or results from another’s work. Authors should not engage in self-plagiarism (also known as duplicate publication) - unacceptably close replication of the author’s own previously published text or results without acknowledgement of the source. ACS applies a “reasonable person” standard when deciding whether a submission constitutes self-plagiarism/duplicate publication. If one or two identical sentences previously published by an author appear in a subsequent work by the same author, this is unlikely to be regarded as duplicate publication. Material quoted verbatim from the author’s previously published work must be placed in quotation marks. In contrast, it is unacceptable for an author to include significant verbatim or near-verbatim portions of his/her own work, or to depict his/her previously published results or methodology as new, without acknowledging the source. (Modeled with permission from *Society for Industrial and Applied Mathematics: Authorial Integrity in Scientific Publication* <http://www.siam.org/books/plagiarism.php>)

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- What can we do to minimize Duplicate Publication?

Definitions

- “**Duplicate publication**”, “**multiple publication**”, “**redundant publication**” and “**self plagiarism**” all refer to a publication “which duplicated previous, simultaneous, or future publications by the same author or group.”

Redundant surgical publications: Tip of the iceberg? Moshe Schein, Ramesh Paladugu, ***Surgery***, 2001, Volume 129, Issue 6, Pages 655-661

Salami Publishing.—

Definition.—“Salami publishing” involves the inappropriate division of study outcomes into several articles, most often consequent to the desire to plump academic vitae. Each article, an unnecessary compartmentalization often referred to as the Minimum Publishable Unit (MPU) or Least Publishable Unit (LPU), provides a minor incremental increase in understanding and could reasonably have been published within one larger article.^{13,44} Some forms of splitting articles are acceptable (such as separating out the literature review) and indeed may be encouraged by journals to avoid exceeding word limits.

An Author’s Guide to Publication Ethics: A Review of Emerging Standards in Biomedical Journals. Jason Roberts, *Headache*, 2009, 49, 578-589

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Duplicate Publications in Medicine.

- **There is an issue of redundant publications and salami publishing has been well known in the medical literature. The journal *Surgery*, 2001, Volume 129, Issue 6 included an editorial and papers on the topic of salami publishing:**
- (a) Duplicate publication/duplicate submission—unfortunately still a problem, Michael G. Sarr MD and Andrew L. Warshaw MD, Pages 653-654
- (b) Redundant surgical publications: Tip of the iceberg? Moshe Schein, Ramesh Paladugu, Pages 655-661
- (c) Consensus statement on submission and publication of manuscripts, Ronald G. Tompkins, Pages 662-663

Duplicate Publications in Medicine.

“almost 1 in 6 original articles represent some form of redundancy”

Table VII. Grading of “suspected “ articles

<i>Definition</i>	<i>Description</i>	<i>Number of suspected articles (%)</i>				
		<i>BJS</i>	<i>Surgery</i>	<i>Arch Surg</i>	<i>Total (% all suspected articles)</i>	<i>% of total articles that year</i>
A. Dual publication	Identical material, methods and conclusions	7	8	5	20 (13.6)	3
B. Potential dual publication	Almost identical material, methods, and conclusions	14	24	12	50 (34)	7.6
C. Salami slicing	Suspected study represents a part of, continuation of, or partial repetition of the index	13	36	28	77 (52.4)	11.6
Total		34	68	45	147	22.3

Redundant surgical publications: Tip of the iceberg? Moshe Schein, Ramesh Paladugu, ***Surgery***, 2001, 129, Issue 6, Pages 655-661

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How bad is the problem in Science?

How common is plagiarism?

A literature search on the word 'plagiarism' reveals numerous editorials bemoaning the problem, but little in the way of hard facts. The data are patchy, often anecdotal and rarely applicable to more than one field. To make matters worse, it's impossible to know how many cases evade detection.

One approach to gauging the frequency of plagiarism and other forms of misconduct is to search for notices of retraction. The results of one such trawl, which used biomedical literature in the PubMed database, were published in January and put the incidence of "recognizable fraudulent

material" at less than 0.02% of all papers⁴.

But surveys that compare individual papers report higher figures. Most of these focus on duplicate publication of clinical papers. Last year, for example, a trawl of 1,234 articles on anaesthesia and analgesia found that 5% were duplicates that did not reference the appropriate original⁵.

A 2001 study of surgical journals put the figure even higher: nearly a quarter of articles published that year had some form of redundancy, and 11% were suspected to be dual publications (see chart). "Redundant publications must be recognized as a real threat to the quality and intellectual

impact of surgical publishing," the authors were moved to conclude⁶. Duplicates have also been shown to cause meta-analyses to overestimate the efficacy of drugs⁷.

The extent of the problem for most basic research is probably somewhere between these two extremes. Rigorous studies have not been performed on basic-research papers, so the problem may be going undetected. But commercial pressures may also encourage the duplication of papers that report positive findings about a new drug. In basic research, where the link between data and profits is less direct, the problem may be less common. **J.G.**

Jim Giles, Special Report: Taking on the cheats, Nature, 2005, 435, 258-259

The challenge of determining plagiarism

Where to draw the line?

Determining what constitutes plagiarism is tricky. Few scientific organizations have quantified the fraction of material that can be legitimately reused between papers, and few researchers have heard of those rules that do exist. So although plagiarism is relatively simple to define in a qualitative sense, it can be extremely difficult to rule on in practice.

Statements on plagiarism usually define the act as attempting to pass off someone else's work as your own. Duplicate publication, or self-plagiarism, occurs when an author

reuses substantial parts of their own published work without providing the appropriate references. This can range from getting an identical paper published in multiple journals, to 'salami-slicing', where authors add small amounts of new data to a previous paper.

When large chunks of text have been cut-and-pasted, such definitions work well. But researchers routinely commit minor plagiarism without dishonest intent, such as reusing parts of an introduction from an earlier paper. To help editors resolve these cases,

Jim Giles, Special Report: Taking on the cheats, Nature, 2005, 435, 258-259

The challenge of determining plagiarism

some journals set an upper limit for the amount of text that can be reused, usually about 30%.

But what should an editor do when a paper looks similar to one already published, but does not contain chunks of text that have obviously been copied? This technique, dubbed 'intelligent plagiarism', is likely to evade detection tools that simply compare strings of text, although including sets of data in the comparison may help to flag up suspect cases.

Generally, the problem can only

be resolved by editors studying the two papers, talking to the authors and making a personal decision on whether misconduct has occurred. "Plagiarism is always a human judgement," says Fintan Culwin, a plagiarism-software expert at London South Bank University.

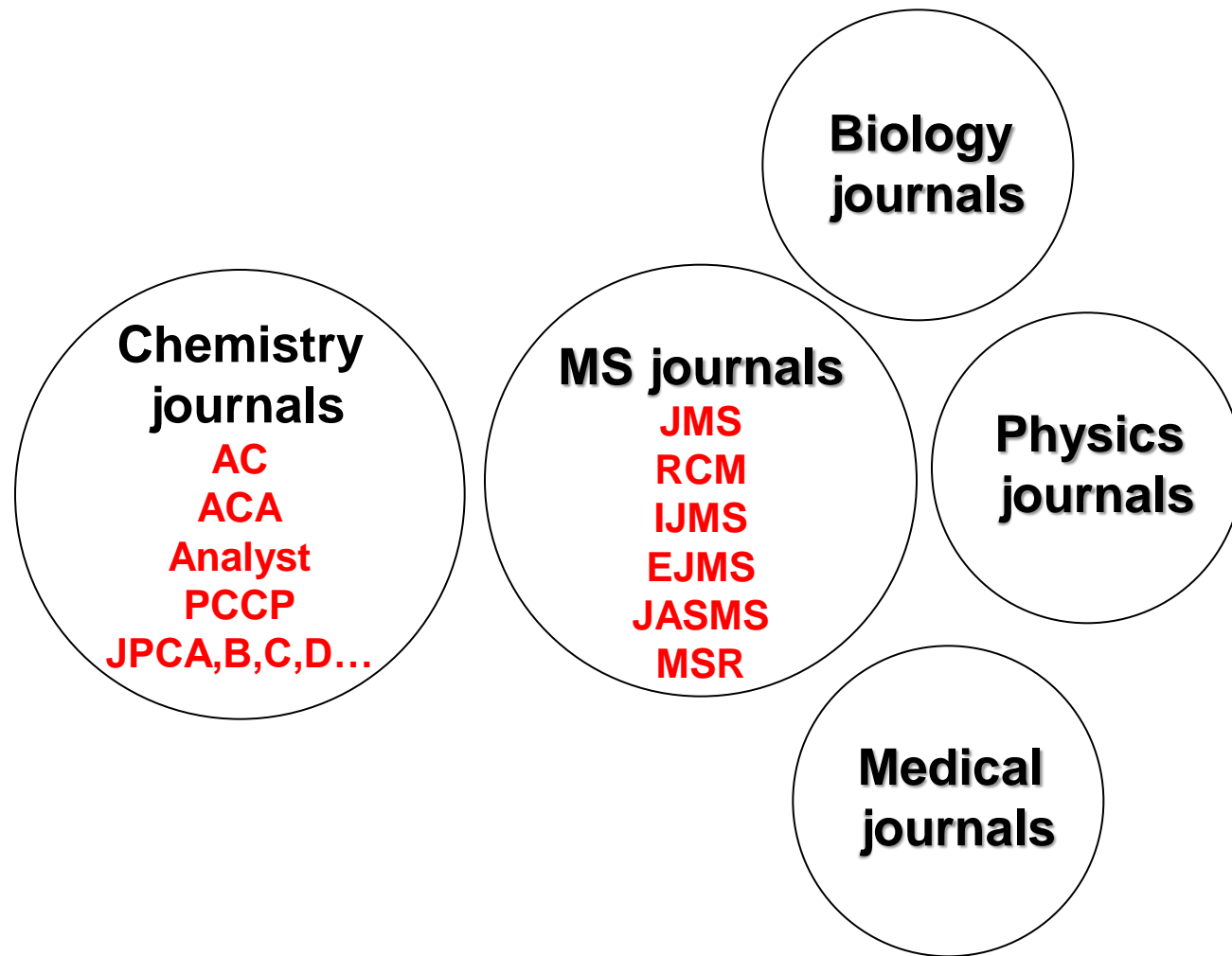
Such cases can also be extremely time-consuming to investigate; one reason why data from the Committee on Publication Ethics, a UK-based group of biomedical journal editors, suggest that many allegations remain unresolved a year after they were first made. **J.G.**

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The Challenge of Detecting Duplicate and Salami Publications:



The number of journals that publish papers that use MS is huge!

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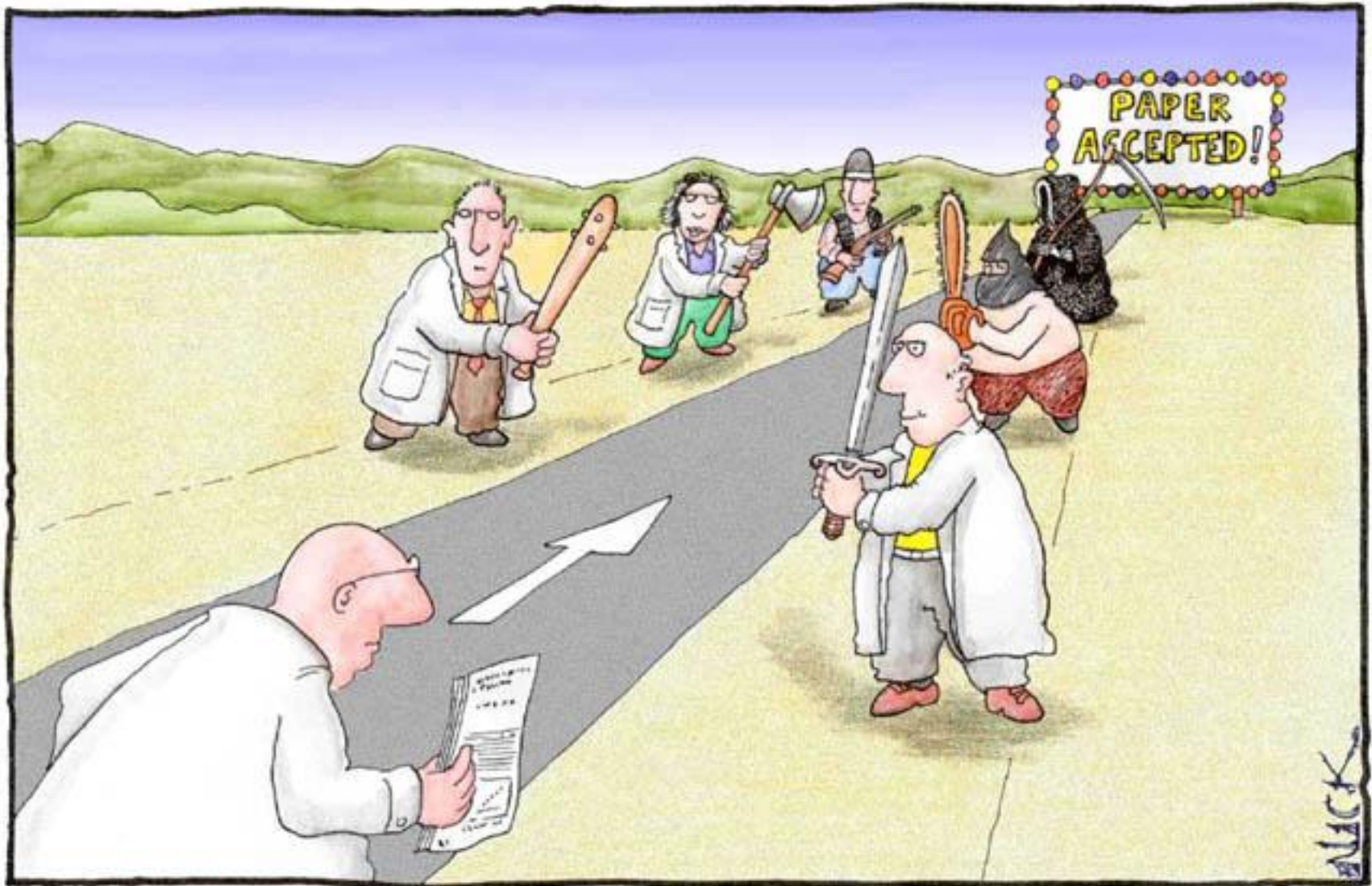
2009 JASMS Literature

- 12 issues published
- 268 articles published
- Were any of these duplicate or salami publications?
- Methodology: Submit published manuscripts to Ithenticate and check reports.

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What can we do to minimize Duplicate Publication?



What can we do to minimize Duplicate Publication?

- More detailed instructions to authors?
- Editorials?
- Use Ithenticate for all new submissions?
- Blacklist authors?

.....discussion??